

A Community Effort to Translate Protein Data to Knowledge: An Integrated Platform

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The ultimate goal of the BD2K Initiative and therefore, of each BD2K Center, is to enable the biomedical research community to use the various types of Big Data for research. Inherent in the success of each BD2K Center is not only the engineering of novel tools and platforms for handling and analyzing biomedical Big Data, but also the utilization of the diverse expertise and specialties of each Center, thereby connecting with the scientific community as well as the general public to disseminate and build enthusiasm for Big Data research. This concept underscores the supreme necessity for a BD2K Center Consortium that is united under one mission with global influence. The joint-efforts by all the NIH BD2K Centers as a Consortium will synergistically empower the entire community. We envision that these efforts may be collaboratively organized to gain both a broad spectrum of contemporary data science software tools for addressing targeted challenges in biomedical research, and a collection of training resources for fulfilling the educational needs at multiple levels. Our Center will completely serve and support the NIH BD2K Initiative. Accordingly, we will structure our BD2K Center Consortium Activities to achieve four specific aims: 1) Our Center will fully abide the governance of the BD2K Center Consortium through the leadership of Steering Committee (SC), the NIH BD2K Project Team (BPT), and recommendations from the Independent Experts Committee (IEC). We will actively collaborate, organize and participate in all BD2K Center Consortium meetings, SC meetings, and visiting other Centers as instructed by NIH; 2) Our Center will serve the BD2K Center Consortium by assisting the NIH BPT in establishing policies/guidelines to transform the current research culture, and in encouraging Big Data standardization to facilitate data sharing and interoperability in biomedical research; 3) Our Center will proactively collaborate with other NIH BD2K Centers by synergizing workforces and resources, supporting the development of DSR and Training components in the broad BD2K Consortium; and 4) Our Center will unreservedly commit to foster a continuous public recognition and endowment in data science, ensuring an exuberant vitality of data science in biomedical research, rendering the BD2K Initiative a sustainable life beyond the proposed NIH funding period. PUBLIC HEALTH RELEVANCE: The challenges of biomedical Big Data are multifaceted. It requires a joint effort from all BD2K Centers under a unified mission. Our data science innovations will be developed in parallel with our multifaceted plan for rallying enthusiasm among the global population to showcase the remarkable benefits of the BD2K initiative to the world. A community-driven BD2K will best realize its economic benefits, transform data science culture, and shape our society. This BD2K Center Consortium Activities Component is designed to support these collaborative activities.